

DECEMBER, 1961



AMATEUR RADIO  
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Townsville Amateur Radio Club's display at the Townsville Trades and Industries Fair, 28th, 29th and 30th September, 1961. (Left: Mr. Brian Harper, Chairman of Trades Fair Committee; right: Mr. Mal Lappin, President Townsville Jaycees; seated: Mr. Bert Boekholt, VK4LB.) Story on page 25.



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# AMATEUR RADIO

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## EDITORIAL



### THE CLOSE OF 1961

December is with us again and the holiday season approaches when most of us turn to the outdoors, to participate in active sport—those of us who feel young enough; to perhaps finish that job around the house which we kept putting off; to go motoring in search of places we have never been before; or to just take this golden opportunity to take a good rest from the pressure of the year's work in defence of a livelihood. Whatever you might be doing, wherever you might be going, we at Headquarters take this opportunity of wishing you all a very Happy Christmas.

We suggest leaving Amateur Radio alone for a week or two to take advantage of a short time of enjoying other things. There is nothing like shaking off the shackles of things-we-do-off-and-on most of the year to enjoy a complete change of scenery and activity.

1961 has seen a possible culmination of the W.I.A.'s effort on behalf of the Amateur Service to protect the Amateur band frequency allocations. The November issue of "Amateur Radio" carried a brief report about the Government's acceptance of the recommendations presented to it by the Radio Frequency Allocation Review Committee—a committee set up in 1960 by Postmaster-General C. W. Davidson, O.B.E., representing the major frequency users. The task of this committee was to review the allocation of frequencies to all Australian users in the light of the proposed Geneva Frequency Table, 1959, with a view to rationalising the use of the frequency spectrum by the various Australian transmitting services.

The recommendations of the R.F. A.R.C. include some sweeping changes which in some instances will be costly. The committee also provided 13 television channels for the future requirements of the Australian Television Service. The Amateur Service

came under constant review because of its allocations throughout the spectrum. A completely unbiased committee working in the national interest looked very closely at Australian Services before it made recommendations and what finally was submitted to the Government completed a year's work by a team of representatives qualified to see that justice was done in allocating these frequencies from one end of the spectrum to the other.

The Australian Amateur Service lost a few kilocycles in some parts of the spectrum and gained some in others. It came out with a better status as a recognised Service. It came out with some bands on a shared basis secondary to other services, but at least it maintained its bands. With other services it came out with a recommendation which will protect its operators who operate in areas where t.v. reception is of a low signal strength. To sum the position up in a few words—it came out of it very well indeed.

From now on it's up to the Amateur himself. Use the bands! They are yours to use! If you don't use them some other service will rightly claim they can. This committee made it quite clear that no service—and we repeat, no service—will hold frequencies in the frequency spectrum if they don't use them. That doesn't mean that we have to be filling the bands allocated to us for 24 hours of the day—other services don't do that. But it does mean that we must regularly operate within our bands to justify their allocation.

So take that few days off during Christmas and forget about Amateur Radio. Take a breath of fresh air and commence next year with a new purpose, to come to the air and use up the allocation that has been held for you by dint of hard work with a purpose.

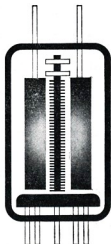
## HAPPY CHRISTMAS!

FEDERAL EXECUTIVE.

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# PHILIPS



## TRANSMITTING AND RECTIFYING TUBES FOR MOBILE EQUIPMENT

The necessity of telecommunication equipment for sea and air transport is obvious. In this field, telecommunication equipment is often obligatory. In many other fields, however, a need for communication is equally felt, but the bulk and cost of transceivers of usual design has long been prohibitive. Faced with this problem, equipment designers and tube and component manufacturers, working in close co-operation, have gradually developed mobile transmitting equipment that successfully combines small dimensions, low cost, ease of operation, high and dependable performance. As a result, mobile telecommunication equipment is being used on an ever-increasing scale in numerous fields, as, e.g.:

- coasters.
- motor launches of shipping agencies, ships' chandlers, contractors of harbour works.
- small fishing boats.
- tugs (e.g., for direct communication with their tow).
- seagoing yachts and other small maritime craft.
- fireguard for contact with central office.
- taxi cabs for contact with the central point.
- doctors' cars for contact with their base.
- building firms for contact between remote or not easily accessible spots.
- public utility firms for contact with their outside personnel.
- service firms for contact with their personnel on vehicles.
- lonely farms in sparsely populated areas.
- airport vehicles.

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(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)
2 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	26.6 35.0*	48	52 69*	52 69*	90	195	200	132	390	375	390	500
20 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	26.6 35.0*	48	52 69*	52 69*	90	195	200	132	390	375	390	500
30 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	26.6 35.0*	48	52 69*	52 69*	90	195	200	132	390	375	390	500
60 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	26.6 35.0*	48	52 69*	52 69*	90	195		132	390	375	390	500
100 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	26.6 35.0*	48	53*	40 40*	90	195			390	375	390	480
120 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	26.6 35.0*	48	35 47*	35 47*	90	195			390	375	390	475
150 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	26.6 35.0*	48	29 40*	29 40*	90	195			390	360	390	465
200 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	20.0 24.0*	48			90	185			197	225		445
300 Mc/s	5.8 7.2*	7.0 8.0*			6.5 8.0*	34.5			75	170						400
430 Mc/s	5.8 7.2*	7.0 8.0*				23			66	155						350
500 Mc/s	5.8 7.2*	7.0 8.0*				22			60	140						325
600 Mc/s		7.0 8.0*				20										290
850 Mc/s		7.0 8.0*														180
950 Mc/s		7.0 8.0*														

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\* Intermittent. † "Quick-heating" version of type QEQ03/12 (6360). ‡ "Quick-heating" version of type QEQ05/40 (6146).





# "THE BEER BOTTLE VERTICAL"

K. C. SEDDON, VK3ACS, and H. L. HEPBURN, VK3AFQ

**R**EADERS may be interested in an antenna used with excellent results by the authors during the 1961 National Field Day when they formed one of the teams operating under the call sign of VK3AFQ/P—The Moorabbin and District Radio Club.

No originality is claimed for it, but we felt that its construction (and perhaps other possible new developments from it) was unusual enough to warrant a mention.

The antenna is a vertical half-wave dipole fed at one end with co-axial cable. On the National Field Day it was used in conjunction with two ended long wires. One was 240 ft. long and pointed NE/SW, whilst the other was 180 ft. long and pointed NW/SE. As they were fairly directional on 14 Mc. to VK2/VK4 and VK6/VK5, the need was soon felt for an antenna which would enable the band to be monitored in all directions. Once a "new" station was heard and identified, the idea was to use the appropriate long wire to obtain a QSO.

However, as it turned out, the vertical gave us as good results on 14 Mc. as either long wire and saw a great deal of use. At the end of the first period of the Contest, nearly two hours were spent in QSO with various Ws who were giving S6-8 reports from the 25w. rig.

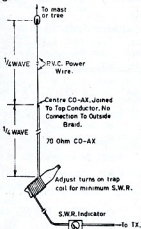


Fig. 1. General arrangement of vertical antenna.

The sketch shows the general set up. A piece of p.v.c. covered power wiring, a quarter wavelength long on 14 Mc., and fitted at one end with an insulator, was soldered to the centre conductor of a long piece of 72 ohm co-axial cable. The end of the co-ax had been stripped of outer covering and insulation for about 1/2" back from the end.

In our case, the junction was made mechanically secure by threading both co-ax and wire through the mounting

● An interesting practical article written by members of a VK3 team in the last National Field Day Contest. The authors developed a new idea for horizontal aerials which as far as known is presented for the first time.

holes of a small stand-off insulator, and soldering the two wires at the tag on top of the stand-off. Any suitable method of strengthening may be used (even a "splint" of dry timber taped on), but it is most important that some form of support be used as otherwise the whole weight of the bottom half of the finished antenna would be placed on the soldered joint.

Next, a 12" length of insulation tape was doubled round the outside of the co-ax a quarter wavelength along from the centre joint. This left a 6" "tab" sticking out from the co-ax. This "tab" was placed lengthwise along an empty beer bottle and eight turns of the co-ax wound onto the bottle over it, so securing the first turn. The last turn was temporarily taped into place round the bottle.

Next, the whole bolting was hauled up from a convenient (?) tree branch until the bottle and coil were about three feet off the ground. (Later on it went a bit higher, but for the moment leave it near the ground.)

The far end of the co-ax was then coupled to the transmitter via a s.w.r. indicator, and the number of turns on the bottle adjusted to give minimum s.w.r. In our case, the reflected power showed less than a division on a meter having a forward power indication of 50 divisions, so that the indicated s.w.r. was at least 1.04/1, and possibly a bit better. We found that we had to make three additions to the number of turns before this state of affairs prevailed, and we finished up with 12 turns. The final turn was then securely taped into place and the antenna pulled up as far as it would go. The bottle finished up about 8-9 feet off the deck.

We could not measure any appreciable variation in the s.w.r. over the 14.0-14.2 Mc. segment of the band we were using.

Because the coil acts as a self resonant trap at the frequency in use, the braid of the co-ax between coil and transmitter is isolated from r.f., whilst the braiding of the quarter wave between coil and feed points effectively becomes the second half of a dipole. Thus the whole thing acts as a conventional centre fed vertical dipole, with a feed impedance in the region of 70 ohms.

The co-ax from transmitter to coil can be of any length you please as it is acting as a non-resonant feeder.

Coil winding data may vary somewhat with different formers. The num-

ber of turns we used will not be exact in all cases, but will form a good starting point if your former is between 3 and 3 1/2 inches outside diameter. You simply add on turns or take them off until you obtain the lowest s.w.r.

Other frequencies can be tackled in the same fashion. Lower frequencies would need more turns (and a much higher tree!), whilst higher frequencies would need less turns. The important thing is to adjust the number of turns of your co-ax on your bottle for the minimum s.w.r.

Whilst it has not yet been tried, there seems no reason why the antenna could not be used in a horizontal position. The feed point being physically at one end, but still electrically in the centre, would then be very useful in the typical suburban lot where centre feeding of dipoles can present a problem if the "shack" is in the house. As the resonant trap has a high L/C ratio, it is possible that it will be effective over the greater part of the band for which it is designed. In addition, the use of co-ax as one active element must tend to decrease the Q of the antenna and so make it less critical to frequency change. This latter possibility could be enhanced and symmetry improved by using second piece of co-ax with inner and outer conductors in parallel in place of the power wire.

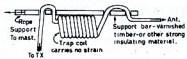


Fig. 2. Suggested end support arrangement.

For a horizontal model, there would be a couple of points to be watched. The need to remove strain from the centre junction and the coil would become extremely important, so that provision of low loss "splints" across them would be obligatory. The second sketch gives suggested constructional details.



Fig. 3. Suggested centre support arrangement.

When one of the authors (VK3AFQ) gets round to putting up a 40 ft. pole, it is intended to carry out measurements on a 80 metre horizontal model, so that there may be more on this subject anon.

As a second development, there is the delightful possibility that the coil trap could be air-cored rather than being wound on an empty beer bottle. This one we will leave to the theoreticians as the practical prospect has little attraction.



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PT1778	175	350	5v. 3a., 6.3v. 3a., 6.3v. 3a. c.t.	78/6	+ tax
PT1783	180	410	5v. 3a., 6.3v. 4a. c.t., 6.3v. 5a. c.t.	100/-	+ tax
PT1782	200	450	5v. 3a., 6.3v. 3a., 6.3v. 3a. c.t.	106/-	+ tax
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# GETTING TO KNOW THE OSCILLOSCOPE

## PART ONE

J. L. K. MATCHETT,\* B.A., B.Sc., B.Ed., VK3TL

WHEN one first examines the control panel of a cathode ray oscilloscope, one is struck with the complexity of the apparatus. It would seem that it may be too complicated an apparatus to explain to pupils even of Matriculation standard. And whilst the writer agrees that there are many components in its circuits, it is not impossible to carry out a number of simple experiments which illustrate the principles behind its rather complex circuitry. Such experiments serve to bring out some of the practical applications of resistors, capacitors, electron emission and so on, which are studied by the pupils. It is the purpose of this demonstration then, to illustrate some of these principles with apparatus easily procurable by the teacher.

Probably the best starting point in understanding the cathode ray tube (which is the most important component of the cathode ray oscilloscope) is the ordinary electric light globe. A current may be passed through it and the pupils told that hot bodies emit negatively charged particles called electrons. In the case of an electric light globe, the electrons simply form a space charge about the hot filament.

The next step is to revise the pupils' knowledge of the wireless valve. Point out the function of the plate, cathode, filament and grid. Obtain a few old radio valves from the local radio repair shop. (He will be only too glad to get rid of them.) Wrap some clothing around each one in turn and gently squeeze in a vice. In this way only the glass envelope will be smashed and not the valve electrodes.

The directly-heated cathode type (ordinary battery type), may be compared with its indirectly heated equivalent (a.c. mains type), with its separate cathode coated with material which will readily emit electrons when hot. Some c.r.o.s. have their cathode connected to their filament, i.e. heaters, others not. Valve types should be examined and the teacher could demonstrate that the hot filament is emitting electrons by means of a simple electro-

scope. Once the principles of the triode are understood, it is time to examine the c.r. tube itself, and the similarity to the radio valve pointed out.

Concentrate upon the cathode, heater, grid and accelerating anode electrode. Fig. 1 shows a simplified drawing of the c.r. tube.

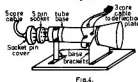
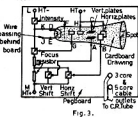
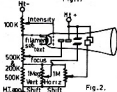
In addition, the electrodes are connected to pins which protrude from the base of the c.r. tube as in the case of a radio valve. Not all c.r. tubes are as simple as this, but they all have an electron gun that is a part that shoots electrons toward the screen.

A simple circuit for the c.r. tube may now be examined. A circuit show-

ing values which ensure proper shift of the electron beam, focus, etc., are only found by experiment, but the writer found the circuit of Fig. 2 suitable for the 905 tube. Undoubtedly it would be quite suitable for many other types.

Most of these components are obtainable from radio odds and ends. All are potentiometers ("pots") as they are called, with the exception of the 200K and 500K fixed resistors.

Note how the grid is made more negative than the filament and also how a voltage (obtained by allowing a current to flow through a resistor) is applied to one of each set of deflecting plates.



The 905 (or 905A or 907, both of which are very similar) is available on the disposals market and is very suitable for classroom demonstration. This tube lacks the usual graphite lining within the tube which serves to facilitate the return of electrons to high tension anode. In addition, the connections to the deflection plates are brought out through the glass about half way down the tube, and so an ordinary five-pin valve socket will suffice for the c.r. tube pins. Whilst on the question of sockets, always try to obtain the appropriate socket for the tube you buy.

In order to demonstrate the c.r. tube, the wiring was set out on a piece of masonite peg board enamelled white to

show up the coloured wires. The size of the board was approximately 2 ft x 1 ft 6 in.

A drawing of the c.r. tube was made upon a stiff piece of cardboard and then stuck on to the peg-board as shown in Fig. 3. The wires as shown leading to the piece of cardboard were then taken at the back of the board to the cable outlets. The three-core cable is connected to one of each set of plates and the high tension to each of the remaining plates (Connections A, B and C in Fig. 3). The five-core cable (or one ordinary three-core and one two-core cable) is connected to each of the two heaters, the grid, focusing anode, and accelerating anode. (Connections D, E, F, G and H in Fig. 3.) Fig. 4 drawing shows the connections of each cable to the actual c.r. tube.

The socket connectors of most c.r. tubes differ from each other. In the case of the 905 (or 905A or 907), they are:—

- Pin 1—Heater.
- " 2—A1 (focusing anode).
- " 3—A2 (accelerating anode).
- " 4—Grid.
- " 5—Cathode-heater.

Unfortunately socket connections for c.r. tubes are not shown in valve manuals, but some are listed in the A.R.R.L. Handbook which is possessed by almost all Radio Hams and many technicians. This volume also contains details of filament voltage, filament current, anode voltages and grid bias. Amongst the common c.r. tubes available on the disposals market at reasonable prices (average about 30/-) are the following: 5BP1, 902, 915, 3AP1 (or 906), VCR-132A, VCR138A, VCR97, 511, 913, CV-112. None of these tubes require high voltages. When buying a c.r. tube avoid buying one which requires magnetic deflection coils. Electro-static deflection tubes have simpler circuitry and illustrate principles more clearly.

The electric light switch cover affords protection from any contact with the bare radio valve socket and is squeezed over the cable. The three wires of the three-core cable are connected to the deflection plate caps with four insulated plate caps of an 807 transmitting valve type. The actual c.r. tube is mounted upon a heavy baseboard by means of aluminium brackets cut to fit the diameter of the tube. When fitting brackets ensure that rubber padding is used so that the tube will not be scratched. It should be noted that once set up the tube should not suffer any vibration and must not be scratched with metal or the tube may explode. Four other connections are necessary to the peg-board in addition to the two cables. These are firstly two twisted wires which come from a source of filament current. This is usually a 6.3 volt supply but in the case of the 905, a 2.5 volt supply is necessary. A dropping resistor of high wattage rating may be used to drop the voltage across the filaments from 6.3 to 2.5. You will find

(Continued on Page 7)

\* 645 Riversdale Rd., Box Hill, Victoria.

The above article is the summary of a demonstration given by the author to Secondary School Science Teachers during the Summer School, January 1959.

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Standby .....	2.4 amps.
S.S.B.—no mod. ....	10.5 amps.
S.S.B.—peak out .....	18 amps.
A.M. 100% mod. ....	18 amps.
C.W. maximum out .....	23 amps.

 No need for alternators or heavy duty generators.
- ★ Switch on front panel selects tracking or independent frequency control.
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Sole South Aust. Agent: TELEVISION & RADIOTRONIC CO., 11a Gays Arcade, Adelaide

Sole Queensland Agent: GENERAL IMPORT DIST., 135 Lutzow Street, Wellers Hill, Brisbane

## W.I.A. EXHIBIT AT HOBART

The Tasmanian Division of the W.I.A. staged an exhibit at a recent Hobbies and Careers Exhibition organised by the Hobart Junior Chamber of Commerce in the City Hall, Hobart, from 5th to 9th September. Being during the school holidays, the exhibition was well attended by both children and adults alike—emphasis seemed to be on careers, other exhibits being provided by

Operation was on 80, 40, 6 and 2 metres under the call of VK7WI/P. V.h.f. only was used throughout the day, both around the town and, using a walkie-talkie on 2 metres, to points around the hall. Mike VK7ZAV did a marathon job through the period and was reinforced by others when possible. Gear on display included QSL cards and certificates, converted and uncon-



the Services, various government departments, plus private enterprise.

We received very good publicity, signed quite a few new members, were featured by the local commercial t.v. station, and had an "interview" recorded, via Amateur Radio, and re-broadcast over a local national radio station.

verted disposal gear, Ross Hull and R.D. Trophies, plus various bits and pieces.

A special QSL card will be issued to all stations contacted.

Pictured is the exhibit and some of the v.h.f. boys, from left: Wilf VK7ZAG, Mike VK7ZAV, Reg VK7ZAO, and extreme right, Bryan VK7ZBE.

## ALWAYS SWITCH TO SAFETY

### SAFETY PRECAUTIONS

Even a few hundred volts can cause most unpleasant physiological effects if carelessly handled. The voltages developed in many Amateur stations are capable of causing injury or death. Reasonable precautions should always be taken.

All apparatus and wiring should be so placed and constructed that it is impossible to touch points of high direct-current or radio-frequency potential under normal operating conditions.

The aerial should never be directly connected to the anode coil of the output stage (this is illegal and highly dangerous). Never attempt to change transmitter coils with the power ON.

Use double-pole iron clad switches to ensure complete isolation of all mains transformers. These switches should be clearly marked with ON-OFF positions. Some other person in the house should know where to find the main switch for use in case of emergency.

High wattage bleeder resistances across power supply filter capacitors will prevent many shocks. If it is necessary to touch the transmitter while the power is ON, keep one hand behind your back or in your pocket; never wear headphones while working on a transmitter.

Insulated extension spindles fitted to transmitter tuning controls will eliminate danger from exposed grub screws.

**MAKE SURE THAT ALL METAL WORK IS EFFECTIVELY EARTHED**

—Reprinted from R.S.G.B. "Bulletin."



## APPLYING FOR AN AWARD?

When applying for an Amateur Radio award, whether direct, through the W.I.A., or through an overseas society, always:—

1. Write a letter of application for the award.
2. Supply a check list showing the essential details of the cards submitted, viz. Date, time, band, mode.
3. Write your name, address and call sign legibly on each application sheet.
4. When forwarding QSL cards, always enclose international reply coupons or appropriate unused postage stamps for the return mailing cost on your cards.

Your close attention to the above-mentioned points will make the task of the Awards Manager ever so much easier.

—Eric Trebilcock, BERS-195.

## KNOW THE OSCILLOSCOPE

(Continued from Page 5)

a length of ordinary electric jug element satisfactory. For your calculation, the current through the filament is rated as 2.1 amps. In many cases, the dropping resistor won't be necessary, for some old power transformers with a 2.5 volt heater winding are to be found at a very cheap price since they are no longer used in radio circuits. The remaining two wires are connected one to each of the high tension terminals as shown.

To ensure good connections, two insulated terminals, one red, one black, are fixed on to the peg-board for the h.t. and two cheap green terminals for the filament wires. These terminals are shown on Fig. 3 as points J, K, L and M. The shafts of the four pots were brought out to the front of the peg-board and small square blank scales with pointer knobs fitted. Full use should be made of old radio parts which are available at low cost. Some useless valves are on the disposals market for a few shillings and some of these are very large; thus their parts are very

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# RESULTS OF REMEMBRANCE DAY CONTEST, 1961

OUR congratulations this year go to Western Australia for regaining the Remembrance Day Trophy from the holders for the last two years, Tasmania. We understand that a lot of organising went into contest preparations in W.A., and the results prove that the effort certainly was worth it.

Second place goes to South Australia, followed by Tasmania, New South Wales, Victoria and Queensland, in that order.

An interesting sidelight is that this year VK2 beat VK3 into fourth place. The bands were well populated during the Contest, but it is a pity that some States still have a participation factor of less than 10%. Victoria sent in only 80 logs out of 1,314 licensees, while for instance Western Australia submitted 87 logs out of only 288 licensees.

After all these years it becomes quite obvious that the larger States will never get the required number of log entries to win the Contest. Several suggestions for changes in the rules and in the scoring system have been submitted with this year's logs, and next year we may try something new. The Federal Contest Committee will study the possibilities of any suggestion sent in and will, in due course, submit the most promising to Federal Executive and to the Divisions for consideration. If you have any ideas, let's hear them.

Unfortunately the Contest Committee's lot is not a happy one. In the past we have not passed much comment on the logs received. Due to the large number of logs which, in one way or another, do not comply with the rules, we feel we owe it to the contestants to point out the major mistakes made.

Wherever possible the Committee has corrected the faults, but unfortunately we had to disqualify several logs which, among other things, did not show the time when each contact was made. Apart from those, there were quite a number of logs without the front sheet, some were without the declaration, while others started serial numbers with a number other than "001", claimed wrong points (obviously through reading the scoring table from top to bottom), claimed no points at all, had the names in G.M.T., had the log order of bands worked in or in order of c.w. and phone contacts, instead of in numerical order.

By careful reading of the rules, all these mistakes could have been avoided, saving the contestants points and the F.C.C. a lot of extra work. We are happy to say, however, that the biggest logs without exception were excellently made out and we found hardly any faults in them. We hope that the above remarks will help everybody to send in better logs and obtain bigger scores next year.

Unfortunately, quite a few of the Short Wave Listeners had also trouble with the scoring, nearly half the logs had wrong scores. Many listeners claimed points for both the stations calling and the stations being called. This F.C.C.'s interpretation of Rule 3 (Receiving Section), and its ruling, is that points can only be claimed once for one particular contact, whether or

REMEMBRANCE DAY CONTEST 1961 RESULTS									
State	Total State Score	Aver. Top Six	Licensees	Log Entry	Percentage	State Log Aver.	Total State Points		
New South Wales	23676	940	1372	124	9.04	191	3079		
Victoria	16793	746	1314	80	6.09	210	1776		
Queensland	9094	594	446	48	10.76	189	1573		
South Australia	17357	917	518	78	15.06	222	3529		
Western Australia	10787	546	288	87	30.21	124	3805		
Tasmania	7916	600	148	49	33.11	162	3221		

not both sides of the contact can be heard by the listener.

One other thing we would like to mention. In all States club stations entered the Contest under their own call sign, without showing the call sign of the operator of the station, as required by Rule No. 6. There have been precedents to this in previous Contests and we have therefore accepted these logs this year. However, as it is possible for one operator to submit two logs, one under the club station call sign and another one under his own, the rule regarding substitute operators will be re-worked to make it quite clear that club stations come under this category.

F.C.C. hopes that the above remarks will not be taken as criticism, but rather as what they are intended to be, an attempt to give everybody a chance to submit a bigger and better log for the next Contest.

Once again our congratulations to Western Australia for a very good effort, and we hope that all States will put up a good fight next year in trying to win the trophy from them.

Now here are the results in detail.

STATE TROPHY	
Western Australia	3798 points
HIGHEST STATE LOG AVERAGE	
South Australia	222 points
HIGHEST INDIVIDUAL SCORE	
VK5NO	1389 points

OPEN—AWARD WINNERS	
VK2AHM—R. J. Whyte	1215 pts.
3ALZ—I. F. Berwick	874 "
4DP—D. M. Portley	919 "
5NO—L. H. Vale	1389 "
6RU—J. E. Rumble	903 "
7MZ—H. Hancock	362 "

Phone—	
VK2AHM—N. A. Hanson	1072 pts.
3ADW—D. A. Wardlaw	839 "
4UX—C. P. Singleton	609 "
5FT—F. K. Tapley	959 "
6KW—R. W. S. Hugo	592 "
7MS—D. M. Slowan	807 "

C.w.—	
VK2QL—F. T. Hine	556 pts.
3XB—I. Stafford	423 "
4XW—G. Harner	251 "
5MY—H. M. Roberts	457 "
6SM—M. H. Shaw	358 "
7SM—S. G. Moore	446 "

Receiving—	
L2211—R. C. Abernethy	808 pts.
L3076—R. Young	629 "
T. A. Lane (VK4)	363 "
K. A. Wehr (VK5)	1084 "
L6021—P. W. Drew	586 "
R. De Balfour (VK7)	965 "

NEW SOUTH WALES	
Top Six Logs—	
VK2AHM	1215 points
2AHM	1072 "
1PM	948 "
2ASZ	842 "
2DO	821 "
2BO	740 "

Phone—	Cont. Pts.		Cont. Pts.		
VK2AHM	373	1072	VK2VO	30	70
1PM	360	948	2GV	29	64
2AKL	199	621	2ACZ	34	64
2ADZ	207	609	2AQU	18	62
2VU	199	573	2OD	26	62
2VU	203	528	2RU	12	50
2AP	173	510	2JA	22	48
2AWZ	189	486	2AV	14	47
1AOP	188	438	2TP	27	47
2AXI	197	439	2MI	15	44
2NB	128	360	2P	17	43
2YN	134	345	2FY	23	43
2ALV	129	332	2BK	23	41
2XG	104	314	2AKV	8	37
2AHV	128	300	2LW	11	35
2CS	113	255	2LQ	12	35
2AKA	85	247	2AYZ	16	34
2EO	77	245	1RJ	19	31
2AFP	105	223	2AJL	7	29
2BB	108	216	2JS	14	29
2OH	88	215	1EM	18	29
1VB	101	207	2AWF	14	28
2AXX	106	190	2ME	10	22
2AHT	73	190	2AWI	6	20
2ALU	59	189	2ADZ	6	19
2ACQ	79	188	2AAH/M	5	18
2AQJ	76	174	2LA	9	18
2AEB	46	180	2AQK	7	17
2EL	49	165	2JF	8	17
2ADL	49	156	2GJ	9	17
1KM	75	156	2AAT	10	13
2ALU	61	152	2AKX	7	12
2XP	62	149	2AWX	7	12
2MW	53	147	2OZ	9	12
2OE	41	114	2ACS	6	11
2AC	46	101	2WI	6	11
2AFQ	44	89	2MP	6	10
2BX	33	88	2ADM	8	10
2K	37	78	1MU	9	10
2ACD	24	76	1KK	Disqualified	
1DG	38	74	2DE	Disqualified	
2AIM	30	71			

Open—		Cont. Pts.			Cont. Pts.
VK2AHM	—	405 1215	VK3QA	—	10 167
2ASZ	—	317 842	2FE	—	58 143
2DO	—	299 821	1SB	—	53 96
2VU	—	257 740	2YC	—	26 61
3PN	—	230 715	7AC/2	—	32 77
2APK	—	209 673	2CH	—	17 50
2AGS	—	200 493	2AUC	—	20 42
2CK	—	124 321	2HZ	—	15 41
2AOC	—	116 312	2AHA	—	15 31
2AGH	—	83 284	2PL	—	10 19
1ST	—	78 254	2AVN	—	7 12
2EFU	—	87 198			

C.W.—		Cont. Pts.		Cont. Pts.	
VK2QL	185	556	VK3ZC	25	50
2EO	112	342	2PK	17	47
2VU	118	528	2YV	10	35
2YN	81	247	2EG	12	35
2CT	82	241	2AFZ	9	34
2DI	64	222	2OT	9	26
2HC	64	197	2QW	9	24
2HC	28	82	2OW	8	23
2TM	18	58	2XQ	11	17
1AB	18	53	2ANU	Disqualified	
2ZO	20	52			

# VICTORIA

## Top Six Logs—

VK3ALZ	874 points
3ADW	839
3AIT	753
3DF	753
3APJ	625
3UW	622

## Phone—

Cont. Pts.	Cont. Pts.
VK3ADW	314 839
3AIT	274 763
3DF	294 753
3UW	233 622
3BB	214 591
3ARD	218 569
3NN	177 449
3AXT	214 536
3EF	210 328
3OM	230 326
3TG	145 413
3ATP	148 410
3QV	152 393
3AHA	183 379
3GW	155 329
3AUL	150 323
3XS	151 319
3AF	129 310
3AUK	122 271
3WM	60 216
3IE	59 196
3ZU	76 182
3DY	66 172
3AAT	51 164
3AF	72 145
3ATR	50 144
3KV	41 139
3AL	50 135
3ABP	40 119
3YQ	47 118
3AHN	42 119

## Open—

Cont. Pts.	Cont. Pts.
VK3ALZ	285 874
3APJ	239 625
3AUL	150 323
3XE	82 177

## C.W.—

Cont. Pts.	Cont. Pts.
VK3BX	157 423
3BQ	150 321
3RJ	108 280
3AKN	109 261
3CX	22 68

## Phone—

Cont. Pts.	Cont. Pts.
VK4UX	228 609
4TM	212 569
4BQ	189 451
4PS	141 425
4BZ	194 393
4LT	161 393
4FN	153 349
4HC	106 331
4LJ	142 297
4B	60 232
4Z	141 207
4CP	118 221
4NS	112 192
4XU	109 181
4K	60 134
4ZB	51 122
4OV	28 108
4BL	31 106
4DO	46 101

## Open—

Cont. Pts.	Cont. Pts.
VK4DP	357 819
4BZ	154 393
4TY	101 258

## C.W.—

Cont. Pts.	Cont. Pts.
VK4XW	101 251
4F	90 207
4F7	83 186
4KE	65 158

# SOUTH AUSTRALIA

## Top Six Logs—

VK5NO	1389 points
SWO	1045
5PT	807
5ZK	807
5TC	680
5MS	642

# Phone—

Cont. Pts.	Cont. Pts.
VK5FT	322 859
5ZK	300 807
5MS	222 842
5QK	222 842
5BQ	122 481
5ZB	146 464
5EQ	146 466
5QV	168 370
5XM	141 369
5AW	144 356
5GZ	102 356
5SL	106 354
5DC	136 333
5NN	107 316
5IN	132 289
5TJ	106 256
5EN	82 249
5DP	93 196
5LC	60 196
5PM	73 193
5CV	50 156
5QW	160 157
5OK	56 157
5GW	74 136
5NW	42 131

## Open—

Cont. Pts.	Cont. Pts.
VK5NO	473 1389
SWO	349 1045
5TC	240 807
5GZ	161 484
5WC	174 423
5EF	133 383
5CV	67 185

## C.W.—

Cont. Pts.	Cont. Pts.
VK5MY	463 457
5XK	137 344
5LD	109 282
5KU	48 126
5XZ	55 105
5KO	34 95
5BX	30 93
5RZ	26 80

# WESTERN AUSTRALIA

## Top Six Logs—

VK6RU	903 points
6RW	522
6CL	530
6AR	535
6AD	535
6SM	357

## Phone—

Cont. Pts.	Cont. Pts.
VK6KW	248 382
6CI	239 380
6AR	221 323
6AD	188 357
6RS	152 342
6CX	146 321
6ZZ	137 323
6MK	130 298
6WL	114 273
6RG	115 271
6RE	100 248
6CR	102 241
6XG	96 238
6XO	92 214
6XZ	92 214
6TR	76 166
6GH	62 139
6TS	59 143
6KJ	52 140
6RW	52 139
6CW	55 136
6XU	50 131
6CA	55 133
6LG	55 122
6AB	56 120
6MO	50 109
6NP	34 85
6BU	36 79
6CF	34 77
6TK	30 76
6TH	33 69
6RH	32 65

## Open—

Cont. Pts.	Cont. Pts.
VK6RU	306 903
6KJ	97 228
6VK	94 208

## C.W.—

Cont. Pts.	Cont. Pts.
VK6SM	135 253
6WV	6 21
6AS	22 57
6RS	10 26
6CF	14 26
6V	9 26
6IG	9 29
6ZO	7 20
6AJ	7 20

# TASMANIA

## Top Six Logs—

VK7MS	807 points
7AI	650
7SF	650
7RL	627
7SM	446
7MZ	382

## Phone—

Cont. Pts.	Cont. Pts.
VK7MS	307 807
7AI	264 650
7SF	260 627
7GC	127 310
7CK	127 310
7MX	148 306
7KH	132 265
7D	44 173
7DS	91 155
7FJ	71 142
7IL	94 134
7DW	32 88
7BQ	29 78
7CT	21 47
7AB	20 45
7JD	15 43

## Open—

Cont. Pts.	Cont. Pts.
VK7MZ	134 362
7CK	127 310
7KS	54 135
7JB	44 108

## C.W.—

Cont. Pts.	Cont. Pts.
VK7SM	444 466
7KA	131 344
7ZZ	122 314
7KY	83 201

# PAPUA/NEW GUINEA

Cont. Pts.	Cont. Pts.
Phone: VK9AM	244 630
Open: VK9RO	120 318

# ANTARCTICA

Cont. Pts.	Cont. Pts.
Open: VK0VK	51 306
C.w.: VK0JB	12 72

# RECEIVING SECTION

Cont. Pts.	Cont. Pts.
New South Wales—	808 points
WIA-1207—	W. P. A. Pascoe
L2033—	D. W. Shepherd
L2022—	G. Grantley
L2064—	R. B. Flindley
L2064—	A. Mullen
L2064—	D. Schodt
L2069—	Dunham
L2145—	P. Vernon
L2145—	R. H. Butcher
L2214—	D. Walker
L2028—	D. Hayes
L2190—	J. Dent
L2190—	D. Russell
Victoria—	629 points
WIA-1207—	R. Young
L3069—	E. C. Hutchins
L3062—	E. W. Treblecock
R2024—	M. Radzow
L3045—	J. R. Woodman
L3089—	J. Johnson
L3101—	G. Harrison
L3105—	R. Cox
L3085—	D. Thomas
L3074—	M. Hillard
L3104—	H. Jenkin
L3104—	N. Duncan
L3096—	L. Bunks
Queensland—	363 points
T. A. Lane	159
L. O. Talley	159
South Australia—	1054 points
WIA-1203—	P. J. Field
L5027—	M. J. Martin
L5036—	G. D. Ducker
L5043—	S. Gregory
L5043—	D. R. De Cean
L5043—	K. Russell
Western Australia—	586 points
WIA-1201—	P. W. Drew
L6093—	F. H. Price
L6096—	D. S. Pratt
L6091—	W. L. Hardwick
Tasmania—	955 points
R. A. De Balfour	542
G. C. Johnson	368
G. F. Sharp	368
WIA-1202—	R. L. Harwood



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# NATIONAL FIELD DAY CONTEST, 1962

Dates: Saturday, 10th, and Sunday, 11th February, 1962.

Duration: Saturday, 1800 to 2300 hrs., Sunday, 1000 to 1600 hrs.

Objects: The operators of Portable and Mobile Stations within all VK Call Areas will endeavour to contact other Portable/Mobile and Fixed Stations in Australian and Oversea Call Areas.

## RULES

1. There shall be five sections in the Contest:—

- (a) Portable/Mobile Transmitting, Phone.
- (b) Portable/Mobile Transmitting, C.w.
- (c) Portable/Mobile Transmitting, Multiple Operators, Open only.
- (d) Fixed Transmitting Stations working Portable/Mobile Stations, Open only.
- (e) Reception of Portable/Mobile Stations.

2. All Australian Amateurs may take part. Mobile or Portable Stations shall be limited to an input of 25 watts to the final stage. This power shall be derived from a self-contained and fully portable source. A Portable/Mobile Station shall not be located within one mile radius from the home(s) of the operator(s), nor be situated in any occupied dwelling or building.

Portable/Mobile Stations may be removed from place to place during the Contest.

No apparatus shall be set up on the site earlier than 24 hours prior to the Contest.

All Amateur bands may be used, but no cross-band operating is permitted.

3. Amateurs may enter for either (a) or (b), or both, in the Portable/Mobile sections.

4. One contact per station for phone and one for c.w. per band is permitted.

5. Entrants must operate within the terms of their licences and in particular observe the regulations with regard to portable operation.

6. Serial numbers consisting of RS or RST report plus three figures commencing with 001 and increasing by one for each successive contact shall be exchanged.

## 7. Scoring:—

### (a) Portable Mobile Stations:

- For contacts with Portable/Mobile Stations outside entrant's Call Area ..... 15 points
- For contacts with Portable/Mobile Stations within entrant's Call Area ..... 10 points
- For contacts with Fixed Stations outside the entrant's Call Area ..... 5 points
- For contacts with Fixed Stations within the entrant's Call Area ..... 2 points

### (b) Fixed Stations:

- For contacts with Portable/Mobile Stations outside entrant's Call Area ..... 15 points
- For contacts with Portable/Mobile Stations within entrant's Call Area ..... 10 points

8. The following shall constitute Call Areas: VK1 and VK2 combined,

VK3, VK4, VK5 and VK8 combined, VK6, VK7, VK9 and VK0.

9. All logs shall be set out under the following headings: Date/Time (E.A. S.T.), Band, Emission, Call Sign, RST/No. Sent, RST/No. Received, Points Claimed. Contacts must be listed in numerical order.

In addition, there shall be a front sheet showing the following information:—

Name ..... Address .....  
Call Sign ..... Section .....  
Call Sign of other operator(s) (if any) .....  
Location of Portable/Mobile Station .....  
From ..... hours to ..... hours  
From ..... hours to ..... hours

A brief description of equipment used, bands used and points claimed, followed by the declaration:—

"I hereby certify that I have operated in accordance with the rules and spirit of the Contest."

Signed ..... Date .....

10. The right is reserved to disqualify any entrant who, during the Contest, has not observed the Regulations and the Rules of this Contest or who has consistently departed from the accepted code of operating ethics.

11. The decision of the Federal Contest Committee of the Wireless Institute of Australia is final and no disputes will be entered into.

12. Certificates will be awarded to the highest scorer in each Call Area. Additional Certificates may be issued at the discretion of the F.C.C.

## 13. Return of Logs:—

All entries must be postmarked not later than 10th March, 1962, and addressed to the—

Federal Contest Committee, W.I.A.,  
Box 851J, G.P.O.,  
Hobart, Tasmania.

## RECEIVING SECTION

14. This section is open to all Short Wave Listeners in VK Call Areas. The Rules shall be the same as for the Transmitting Stations. Logs shall take the same form as for Transmitting Sections, but will omit the serial number received.

Logs must show the Call Sign of the Station heard, the serial number sent by it and the Call Sign of the Station being worked.

Only one lot of points can be claimed for any one contact between two stations, for example: VK2AA/P calling VK3XX/P and exchanging numbers. Points can be claimed only for VK-2AA/P working VK3XX/P. NO points can be claimed for VK3XX/P working VK2AA/P during this particular contest.

Scoring will be on the same basis as for Transmitting Stations. It will not be sufficient to log a station calling C.Q. A station may be logged once only for phone and once for c.w. in each band.

Awards.—Certificates will be awarded for the highest scorer in each Call Area.

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Transistor Type	OC169	OC170	OC171
Collector Voltage ( $V_{cb}$ max.)	—20	—20	—20 V
Collector Current ( $I_c$ max.)	10	10	10 mA
Max. Dissipation (25° C)	80	80	80 mW
Typical parameters at (measured at $V_{ce} = -6V$ , $I_c = 1mA$ )	0.45	10	100 Mc/s
	{common emitter}		{common base}
Input Conductance	0.4	2.5	23 mmhos
Input Capacitance	80	65	—6 pF
Feedback Admittance	< 100	100	600 $\mu$ mhos
Transfer Admittance	36	32	14 mA/V
Output Conductance	7	60	350 $\mu$ mhos
Output Capacitance	7	4.5	2.6 pF
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# Correspondence

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

## S.S.B.—COMMENTS ON EDITORIAL

Editor "A.R.," Dear Sir,

As one of the pioneer s.s.b. operators in this country, who, over the years of s.s.b. operation on 14 Mc., my reading of the Editorial in the October issue of "A.R.," has prompted me to write the letter. It would appear that Federal Executive, over whose name the Editorial appears, is completely out of touch with s.s.b. operation on the 14 Mc. band.

The history and present set-up of 14 Mc. s.s.b. operation is as follows:

Early VK and overseas s.s.b. work was done between 14,100 and 14,200 Kc. Early W operation took place anywhere in the W phone band.

By 1953 the W s.s.b. stations had congregated below 14,300 Kc. and s.s.b. operators elsewhere began to use the 14,300-14,350 Kc. section of the band, or, operated inside the W phone band, a course which in the early days of s.s.b. was a necessity, as often s.s.b. were never listened outside their phone band. This set-up existed late in 1958, when a move to the 14,350 Kc. section of the band to extend the upper limit of the W phone band to 14,350 Kc.

The proposed move was by no means popular, either in Australia or elsewhere. Many clubs and private individuals, both in the U.S.A. and in other countries, put their voices in a strong, but to the F.C.C. and the A.R.R.L. stating what they considered the consequences would be. However, the W phone band was widened, as proposed, early in 1960, to cover the 14,200-14,350 Kc. range.

There followed a period of utter chaos amongst the s.s.b. fraternity, over the whole face of the globe for the best part of six months. The confusion was caused by the signals, into the 14,300-14,350 Kc. section of the band. Unfortunately a large percentage of the signals appeared to be originating from operators with dubious manners, and absolutely no courtesy. The law of the jungle truly prevailed.

QSOs were rudely broken into with squawks of "break break," not by one operator but by many, most of whom were never heard of again after they were given the go-ahead by the F.C.C. The confusion in many other countries would be broken into by five, six or more stations, without so much as "by your leave," or "excuse me," and would appoint himself as M.C. of the whole set-up.

As often as not the original stations, (1) shut down in disgust, (2) shifted to another channel without a word of pre-arrangement, or (3) if they chose, told the inconsiderate ones in no uncertain terms to clear off and continued their QSO.

Many operators, including the writer, almost ceased operating for some months and did a large amount of work in the W phone band to evaluate the situation, and slowly but surely a workable pattern clearly emerged.

The European s.s.b. operators, because of their geographical position, were amongst the hardest hit. The ARRL Society, who were found below 14,200 Kc. and finally congregated in the 14,100-14,130 Kc. section of the band, were in the same predicament, and over the world followed suit, to escape the W QRM, and after all there are over 200 other countries in the world to work besides the U.S.A. and the U.K. The ARRL described what was happening in their phone band and looked with a certain amount of disfavor on the 14,100-14,130 Kc. activity, as being too far away from their phone band.

The 15 Kc. DX s.s.b. segment of band stems from the foregoing situation, one which they were never meant to happen, but they still brought on. There was no need to extend their band right up to 14,350 Kc., a 14,350 Kc. band, or similar, would have done what they now seek, but they would not be told, and unfortunately there are enough inconsiderate operators in W (and not only in W) to make a band in W land, unless made legally binding upon them by the F.C.C., is in the opinion of practically all s.s.b. operators the worst part of the world, a very remote possibility.

Secondly, there are so many s.s.b. DX-operators, and a strong desire to work DX, that, as the ARRL says, that VKs, ZLs and others wish to QSO as well as the Ws, that from that angle alone a VK very often would be in the way of a ZL, and the whole lot of band should some of these stations be there,

and almost always there are now a few of them about.

Again, on 14 Mc., upper sideband is transmitted, so a conscientious operator with a reasonable frequency counter, has to keep at least 3 Kc. in from the band edge. One could guarantee that at the 14,350 Kc. edge of the segment there would be splatter from stations transmitting in the W phone band, Kc., so the 15 Kc. would be really narrower than what it would first appear.

The present situation is as follows: S.s.b. operators who wish to keep clear of W QRM, and work other DX, or work only one W station at a time, usually operate around 14,100-14,130 Kc. and use W QSOs specify the frequency on which they intend to listen for replies. Operators anxious to engage in round-tables, or QSOs, wish to contact DX or other stations operating in the W phone band, themselves operate inside the W phone band, either on, in the case of round-tables, or adjacent to, in the case of DX, the frequency of the other station.

A few operators are sometimes found around 14,200 Kc. but not many. However, W s.s.b. operation can now be frequently heard from 14,200-14,350 Kc. over the full width of their band.

W s.s.b. activity is growing rapidly. Frequently of an evening there are more VK s.s.b. stations than a.m. ones audible on the band. I am, Sydney, Australia, and I am, neither I nor any s.s.b. operator I have mentioned the matter to, has heard any of you active on s.s.b., either on 14 Mc. or any other band.

—N. Southwell, VK2ZF.

## F.E. COMMENT ON VK2ZF'S LETTER

Editor "A.R.," Dear Sir, First let me correct Mr. Southwell's impression, and perhaps others, that the Editorial was meant to imply that W s.s.b. operators in Australia should restrict their operations to the "top 15"—if such impression was created, we apologise, as this was certainly not the intention, nor would the Executive attempt to convey such policy without the proper authority of the Federal Council.

It is well known that in the U.S.A. stations are required, by regulation, to operate within certain sections of an Amateur band. This has been found necessary by the F.C.C. to preserve order and reduce interference between the world's Amateurs who reside there. We, in Australia, are in a much more fortunate position, as our stations are not regulated by our bands are not regulated by the assigning authority. The present voluntary subdivisions in our bands are the results of lengthy and detailed consultations by the F.C.C. with the subdivisions, incidentally, being between phone and c.w. only.

In the case of 14 Mc., the subdivisions are 14-14.1 Mc. for c.w. exclusive, and 14.1-14.35 Mc. for phone emissions which include a.m., n.f.m., p.m., d.s.b. and s.s.b. The Editorial, with these points taken for granted, recommended that any Australian s.s.b. operator at the top end of the 14 Mc. band should follow the A.R.R.L. recommendations and for their convenience and yours, not work any U.S. station in the "top 15". The wisdom or otherwise of the A.R.R.L. in making these suggestions is not for me to say, without any knowledge of all the facts that led thereto, but I believe that in view of the League's recommendations, and the Executive therefore felt incumbent to pass on the recommendation to all s.s.b. operators.

If these points are ignored the Editorial, that is their business; but do not say later that the "top 15", because of the Americans, has been denied us and we are left with a very small world. A little bit of extra band space is surely always welcome.

—Major W. Mitchell, for Federal Executive.

## SUNSPOT ACTIVITY

Editor "A.R.," Dear Sir, Most of us are aware that solar activity plays a major part in the propagation of Radio signals from one point to another point and that the incidence of the level of sunspot activity is in the form of sunspot numbers.

It should interest all concerned that there is a period of low sunspot numbers almost with a regularity, and that the authorities that a near zero sunspot minimum will be reached by early 1965. (By way of comparison, the last time a sunspot minimum was around the 70 mark and for October 1961 it was 51. It can be seen therefore that reception of signals from the outer reaches of the particular will become increasingly worse during the next three years or so.)

With the above in mind, it will be necessary for us to think in the thought the fact that during the period concerned the iono-

spheric layers will become less dense because of low activity of solar activity, this in turn will result in the m.u.f. for h.f. communication becoming progressively lower and the available frequencies for such communication becoming less and less.

Our 3.5 Mc. band should be much in demand from now on, both by day and by night until such time as the present trend towards zero sunspot minimum continues.

—Eric W. Trebilcock, BERS198.

## R.D. CONTEST OPERATING

Editor "A.R.," Dear Sir,

I have read with a certain amount of amusement, sundry letters in your columns moaning about the "rough" tactics of some operators in the R.D. Contest.

It seems strange that the operators who really score well do most of the rest-after-all, they spend the most time on the air and should therefore be in a position to pass judgment on what should or should not be done. It must admit really enjoy participating in this Contest. Apart from the continual battle of tactics in endeavouring to get through the "thick" sections of the band, I have many memories of war years, of friends who never came back, of the thousands who threw themselves into a mad storm or were the cause of freedom-freedom or us to moon and winge.

Every R.D. Contest teaches me something, a shadowy one in no uncertain terms that I must improve something—maybe it's the changeover switching this time, the netting another time, the changing of the netting another time. Perhaps if our disgruntled friends could adopt the same objective attitude they could improve their gear (and their outlook) to such a point that they would find it necessary to complain about some naughty boys treading on their corners.

Let me admit there are a few signals which don't come up to modern standards, but I would hesitate to condemn those concerned. I would rather say "Thank You" to them for their persistence in coming to the net. I would also say that if you yourself can honestly plead not guilty to putting a bad signal on the net, or to making a bad signal, or to either a commercial rig tycoon or you just haven't done much experimenting. The genuine Ham likes a candid, but accurate, report on his shortcomings, and will break down at the most awkward times.

In conclusion, I would like to pass my regards to all our contesting friends. See you again in the next R.D.

—G. W. Groves, VK7XL.

P.S.—The rules of the R.D. Contest do not specify the wearing of kid gloves.

## THE LAZY Z CALLS

Editor "A.R.," Dear Sir,

"What do others think?" Well, I find that Perth (WAKP) has found a very narrow view-point on the use of Z calls. Perhaps he can't understand that some people are more content to work v.h.f. than the lower frequencies.

The use of Z call is the easiest way to obtaining a full licence, using the intervening period to work on the code. However, some operators find the use of the word "work" a very narrow view-point and become quite content to become good v.h.f. operators, which in fact requires far more technical skill than to build up simple gear on, say, 10 Kc. They get a very good result operating v.h.f. DX, they get more kick out of working VKs and JAs from VK3 on 6 Kc. than they do from working Yanks on 20-25 Kc. It doesn't take much effort to work a Yank on 20!

What a boost they could give to the lower frequencies, and to the use of the lower frequencies don't need any boosting—take 40 mx on a busy evening, you can't find a spare licence, why not try to get some more Z calls to fill the empty wastes of 6 and 2 mx where there is plenty of room.

The suggestion that the limited licence be made available for one year only is a very selfish one—for this would indeed deny the medium of Amateur Radio to many, including myself, and I am not enjoying it today, for they would deem it worthwhile to make the effort to take the exam. under those circumstances.

Even now, though I find myself in the position of a "work" licence, and I am not enjoying a full licence, I feel that a majority of my own operating will still take place on the v.h.f.s, and I think this is the attitude of a lot of operators.

If the Limited licence were to be current for one year only, there would possibly be few operators who would step forward and try to operate if they were to pass the c.w. within 12 months, so why give them a call sign at all?

To summarise, I think the Z licence is a step forward from the old system, because—

(1) It is enabling people to become licensed Amateurs who would otherwise have considered the station too far away to be worth the effort.

(2) It is a means of populating the previously little-used v.h.f.s.

(3) It is a means of v.h.f. art to progress by these very Z calls trying consistently to improve their equipment, and opening up new aspects altogether in Ham Radio, such as v.h.f. f.m., l.v. and microwave technique.

—Bill Bell, VK3ZFG.

#### IN REPLY TO VK3ZC/T

Editor "A.R.," Dear Sir,

No one, I repeat, no one advocated the use of low power and omni-directional antennae. I have never seen any collector of DX, or entirely separate and as inferred by SZCR, entirely out of context.

The statement that he operates discriminates against low power stations is revealing. Another OPERATOR on the v.h.f. bands. When are you going to learn that we were probably originally licensed as an experimental station. How many stations have lived up to their licence?

Again let's get a few things straight. How many of the present v.h.f. Amateurs were once collectors of DX? How many of the present collectors of DX were once operators? Think of the newcomer today who, because of the way the bands are used, has no order of preference for a receiver before he even thinks about the converter. By the time he's paid this out there is not very much left for a 50w. transmitter. I run 40w. input but I took me 12 months or 2 years to accumulate the necessary parts to build it. There would be very few of us in the position of being able to spend £10 a month on Amateur gear and not worry about it.

Anyway, let's not run down the bloke with low antennas, it's his business how much he runs (the economics are only one part of it). Let's turn our converters up properly and listen at the same time. I've heard better 3-watt signals on 6 than a lot of the 150w. signals that clutter up the band.

The one naggle about stations who can't hear me is when they are running 5 or 6 watts and are getting 5 x 9 this end. I don't need a 100 watt collector or 100 much noise—which can quite readily be understood. Anyway, have you ever taken a 100 watt lister with a collector and 15w. input on 522? You may get a conversion to 15w. but the 100 watt collector will be a lot of them are doing better than home-brew rigs. I think the Institute did a good job in recommending a 522 at 15w. and a 100 watt collector can afford. If they'd do the same with good receivers things might be better.

120 Kc. is a minute quite a good tuning rate. If you give three minutes to tune from 144 to 143.5 Mc. if the DX is coming through and someone hears you, they'll call for at least this length of time unless they are right on the frequency of the station you just finished with.

The frequency list of Victorian 2 mx stations, soon to be published by the W.A.A. (Vic) shows just what a rat race 2 mx is with four or more stations on the one frequency and maybe 30 Kc. before the next pile up. So when it comes to being able to tune to tune for except a dogpile on each frequency you can't make sense of.

Also when it comes to a time, state which direction you are tuning and from what frequency you are going to start tuning, there should be no trouble in working stations. After all, if you are tuning on a DX opening is not quite the thing it is?

Your last statement re "Every thinking operator..." is commonly known as an admission that you are not a collector. (1) All Amateurs are not operators and vice versa; (2) a lot of them think, and boy, they don't think what you think.

Also when it comes to an armchair and doing the criticizing you can delete all reference to what I said. I've done my share of experimenting and operating and am in most cases on 6 mx.

At least I'm on the band and I will talk to anyone else who is on no matter what the power or signal strength or readability. Let's share our hobby, not be selfish about it.

—Another Angry Young Man.

Editor "A.R.," Dear Sir,

I read with interest the letter from VK-SZCR/T Nov. '61 "A.R." His remarks on the 144 Mc. band have caused me to put pen to paper. My observations in searching for weak stations follow. I am sure that most of the most operators would have a similar problem, as 1200 Kc. is a lot of band to tune carefully, and even with the best power, only 300 Kc. is the correct approach to the solution.

Several years ago Ballarat v.h.f. stations were plagued with the problem of local QRM whilst looking for out-of-town stations. Imagine

six or seven stations all within a mile or two—high powered and well modulated—operating anywhere between 144 and 145 Mc. as was the case in those days. We co-operated and after testing on separation of station frequencies, etc. we came up with the following plan.

We of Ballarat grouped our frequencies in the first instance around 144.2 to 144.4 Mc., but later from 145 Mc. upwards. Thereafter any station wishing to operate on the 144 Mc. band needed (until lately) to tune 145 to 145.2 Mc. i.e. 200 Kc. Each station was given a frequency 20 Kc. steps apart at that time. There were eight stations operating in that section. Now if a similar plan could be formulated for various areas within each State it would be only necessary to place a directional antenna system on a certain direction and tune say 200 Kc. knowing that all stations, in that area, would be on that portion of the time.

Cost? Well before the i.v. channels were revised we were all up for a crystal ranging in 1963 anyway.

—B. M. Stares, VK3ZBS.

[Letters in reply to R. Jones, VK3BG, on the Gentlemen's Agreement have been received, but owing to space limitations will not appear until next issue.—Editor.]

## DX NOTES

(Continued from Page 13)

3BQ, KEIDA, L3WA (0654). CSOF, UWAME, OABR, VYAC, ZGOM, etc. also work 2. A, UBQ, UA1, 2, 3, 4, 6, UP, SP3, 6, 8, 9, ON4, OA2, G3, 5, 6, PA0, OH2, OEI, LD3, DJ2, SM, OK, DM and all areas. Good times here, work VPCB, RA3Q, VSOKGA, KGHD, OD, SCT, SUIM, FA8VN, ZCATX. (I hear a lot of DX calling you OM. Hope your new rig works, too. B. J. Times were GMT.)

It will be seen by the above reports that the bands have been lively. I still want notes on 21 and 28 Mc. however. They should be at their peak by now.

### ADDRESSES

45TEC—Box 907, Colombo.  
ZD7SE—Pia WFFJY.  
5N2BZ—Bia Signal Troop, Kaduna, Nigeria.  
VP2LO—Cliff Wedder, KC6CE, St. Lucia, B.W.I., St. Vincent, St. John, St. Kitts, Nevis, Antigua, N. Laurel Ave., Los Angeles 48, Calif.  
VS9AAC—J.T. A. R. W. Cane Block 1, Bottom West, R.A.P. Khormaksar, B.P.O. 69, Geneva, S.W. 1, France.  
VQCCZ—W. E. Rymer, Box 332, Kiltive, N. Rhodesia.  
HC2IU—J. Rodriguez, Guayaquil.  
5N2AMS—C/o. Ministry of Works, Minna, N. Nigeria.  
TN8AT—P.O. Box 108, Brazzaville, Republic of Congo.

### SUMMARY

Predictions for December. 7 Mc. will fall away somewhat. This and the QRN may make the band less attractive.

14 Mc. may not be up to par, particularly after the action which should occur at night. Europe and Asia should be OK, with Africa also coming through at times.

21 Mc. will be best during daylight hours, but some action should be expected. Keep listening now on this band and 28 Mc. because the next three or four months should see the best frequency action of the year.

Here are some summer pattern listening times, which may prove helpful to the beginner in DX.

7 Mc. band and time E.A.S.T.:  
1700-1900 hrs. Odd Ws. Occasional Central America, N. Africa and West Europe.  
1900-2000 hrs. Odd S. America, near Asia and Js.  
2100-2400 hrs. Asian and northern UAOs.  
0901-0300 hrs. Asia, Middle East, and Europe.  
0300-0500 hrs. Generally a lull but odd Asians sometimes.  
0500-0700 hrs. East Europe, N. Africa, and L.P. to Central America.

14 Mc. band and time E.A.S.T.:

1400-1700 hrs. Occasional Ws and Central America.  
1700-2000 hrs. Add Europe on L.P. and a few near Asians.  
2000-2400 hrs. Mixed bag. Europe on land, Asia and South America.  
0901-0300 hrs. Europe (short path), Asia and N. and S. Africa.  
0300-0500 hrs. Generally quiet.  
0500-0800 hrs. Often good to all Europe and Asia and long path to Central and North America.  
0800 hrs. Ws for a while only and some JAs.

21 Mc. band and time E.A.S.T.:

1300-1500 hrs. Ws and S. America sometimes.  
1500-1700 hrs. Ws and odd West Europe and N. Africa on land.  
1700 hrs. Unreliable, but sometimes open to Europe and Asia.

DX on 28 Mc. opens to the East as far as Central America and West Indies area.

All the above times are to be considered as a general pattern of things, rather than an expected time of occurrence. Naturally, great variations will occur.

If one has reasonably good low angle of radiation, very little power is needed to work DX on 21 and 28 Mc. However, even a watt of power is an advantage on 7 Mc. When the Europeans are at the height of their activity from 1700-2200 hrs. GMT approx. it is almost impossible to work from VK into their area on 7 Mc. as the QRM is just too great.

I have a few enquiries for listening times for DX on 3.5 Mc. During summer I expect the DX heard to be of little consequence, but with the coming of autumn there may be openings over the longer paths. Around 1100 hrs. GMT (give or take about an hour, depending on the QTH), the Ws often show up for periods. I am told that there is also an opening to receive DX from Africa. However, ever, there seems to be practically no activity from that region. Africa might appear (I said only) from the Cape of Good Hope. 3.5 Mc. DX should be a practical and regular affair for distances up to 6,000 miles anyway. But as it is largely over watery wastes it is not very much heard, and is often undisturbed. Next year because of the low solar activity there may be an increase in DX on that band.

Finally this—

"A DX contact needs brevity. Knows most of the Hamming fraternity. But there is one 'bright light', that try as you may, you miss."

Can't resist getting so much into the last over of a QSO, that the boys think he'll go on to Eternity.

Let me take this opportunity to wish all those connected with Amateur Radio and the DX news, a Merry Xmas and a Prosperous and DX-full New Year. It has been a pleasure to receive the DX news and I hope that the time does not permit me personally answering them. I'm really too old, now, to make and receive DX news. I hope that you can make 1962 a bigger and better year in Amateur Radio. 73, Al VKASS.

P.S.—Please have your notes in early this month.

## R.S.G.B. 21-28 Mc. PHONE CONTEST

Radio Amateurs throughout the world are asked to take part in the annual R.S.G.B. 21-28 Mc. Telephone Contest to be held this year on 2nd and 3rd December, 1961.

The rules are the same as in previous years, but the attention of overseas contestants is drawn to the bonus for working each additional ten U.K. stations irrespective of band.

The relevant rules are as follows: Scoring: Overseas stations may only claim points for contacts with British Isles Stations (G, GB, CG, GD, GI, GM and GW). For overseas stations, the minimum number of stations in each band is 10. Stations will score five points. In addition, a bonus of 50 points may be claimed for the number of stations worked in each band. A numerical prefix on each band (i.e. G2, G3, G4, etc.). A further 50 bonus points will be scored for each additional ten stations worked in each of the above categories irrespective of band.

The closing date for posting entries is 15th December, 1961.

There is also a receiving section to this Contest and the rules are as previous Contests.

### OHIO VALLEY AWARD

OHIO VALLEY AMATEUR RADIO ASSN.

In order for those Amateurs interested in earning points to obtain the Ohio Valley Award, the members of the above Association will hold a QSO party beginning Dec. 22, 1961, and continuing to Dec. 31, 1961. Members will operate 30 Kc. above the low edge of all bands on c.w., 10 through 160 mc. and will call CQ, D, and sign their calls/OVA. Members must then be able to maintain the time and band schedule as follows: 10 mc. 1400-1500 and 2200-2300 hrs. 15 mc. 1500-1600 and 2300-2400 hrs. 20 mc. 1600-1700, 2000-0300 and 0600-0700 hrs. 40 mc. 1100-1200, 0000-0100 and 0300-0400 hrs. 80 mc. 0500-0600 hrs. 160 mc. 0500-0600 hrs. All GMT. Send Contest log to W8TIN.

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**H F** pattern as the winter months. George 3ZCG at Morwell on 50.16 Mc. and Stan 3ZAB at Traralgon on 50.45 Mc. look to the north for DX each lunch time and 3ZBV at Morwell will be joining them as soon as his beam is finished. On 18th Oct. between 2130 and 2200 hrs. E.A.S.T. 3ZBN and 3ZDK heard some JA signals but

I read these notes I shall be  
to the land of VK8. I hope  
springs on Saturday, 1st Dec.  
a.m. or c.w. on 50.40 Mc. and  
from about 8 o'clock or so.  
ing north toward Darwin for  
of days, so if conditions are  
be able to do business. The  
er be VK3AAU/8 or VK8AU.  
running about 60w. on c.w.  
olled a.m. Operation from  
minence soon after I arrive,  
ing and also at dinner time,  
at happens to be.

ns to be very slow in making  
as yet no one has reported  
openings. I believe the boys  
en getting a few openings to  
only a few weak JA signals  
elsewhere.

I like to thank all the chaps for their notes to me during the ARZ will be taking over from so give him your support. Many progressive ideas and V3 Group a good lift, and he is taking over the notes. All Christmas and New Year DX from VK8.—3AAU.

20 or more local stations are  
d with a few more listening.  
more in the country also, but

Geoff is running about 150w. ing a 32 element array 50 ft. is 144.09 and times are 103. Sunday and 2100 hrs. on Wed.,

hunt us on Wed. 25th with fox. It finished at Kyle on Fr. First in was Dick 2ZCF covering 10 miles, Jim 2PM second, followed by Dave solo. Many of the hounds and got bushed on the other side to Alan 2ZCS who came in, and also to Paul 2ZPJ on heading off 180 degrees out still hunting. December hunt will start at Top Ryde and Christmas get-together.

Bill 3XE at Hexham reports quite a bit of 6 mx activity down in his part of VK3 including such stations as 3FX, 3ZFG, 3UT, 3AKR, 3AKN and 3ANQ. A new station on this band is Ian 3ZMM, located at Blackburn. Ian is running 12w. input to a 2E3c and is using a dipole as a temporary antenna. John 3ZHN now has his 30 ft. long beam on top of an 80 ft. tower and is intent on working DX.

Two metres had been very active during Oct. 1942. The signal was heard at several places. Some of the more distant stations to work into Melbourne were 3ZCW at Cuyeyat 3J2EA at Rainbow, 3NN at Yanac, 3ATN at Birchip, 5AW at Penola 3ZDZ at Sale, and 3ZCZ at Morda. 3YCI at Nagambie, 3ZC appeared on the band. George 3ZCG at Morwell worked Col 7LZ on 144.62 Mc. at Launceston on 9th Oct. and also heard 7BQ on 144.3 Mc. on 10th Oct. George heard but was not able to establish contact because of high level electrical interference at Col's end. Rex 3VL at Numurkah is believed to have heard 4ZCI on two metres, and I hope to get further news of him.

activity and on 27th Oct. the boys had quite a feast. DX working was at the western stations. For the early risers an early morning net is conducted each morning from 0630 to 0745 hrs. and to date quite a number of DX stations have participated. Anybody is welcome to join in and tuning breaks are taken between each over. The Adelaide boys are also looking eastwards at this time of morning. The far north-western stations are making a point of looking for Melbourne contacts each Sunday evening from 2000 to 2100 hrs.

The 2 mx scramble is very interesting and after five of the series of six, Dick SARK at Geelong is way out in front in the country section with a terrific score of 161, but in the city section it is a close contest with John SZCZ just in front with 109 pts. Michael SZCZ is very close with 108 pts. and Ted JAAD is not far behind with 104 pts. The next 2 mx scramble will be held on 10th Dec. at 7.45 p.m. The average participation in these scrambles is 35. It is a pity the 6 mx scramble does not attract as many entrants.

The Dec. fox hunt will be held on Wed. 13th, commencing at 8 p.m. and will start from College Crescent at the rear of the Melbourne University.

The Oct. V.h.f. Group meeting, held on 10th, was quite successful and approx. 40 members attended to hear an excellent talk from Phil 3APB on v.h.f. communication in aviation, and to see two excellent films. The Dec. meeting will take place on Wed. 20th in the Victory Publicity Building, commencing at 8 p.m. and will take the form of an open night.

The only news from this part of the world comes from Dane 42AX who is in business on 144.00 Mc. He has four 24 ft. long yagis, a high powered tx using 2B3/300 and some rather hot converters which include a parametric amplifier and a nuvistor pre-amplifier. Dane reckons that the bird-perch will only stay up for a couple of months and he is looking for a sked with southern gentlemen suitably equipped. Sideband and c.w. facilities are both available.

**50 Mc.**—This band has been quiet the month, two stations listen during the midday period; 52MK at Waseleys and 52BR at Gawler; but as yet no DX has been heard. 5JH goes out portable now and then and provides some interesting contacts on 50 Mc. about 30-40 miles.

**Two metres** has been reasonable. 52DR has skeds every evening with 5AW at 2300 hrs. 52CR and 52BR at 2330 hrs. C.T. 52NR has worked more often than 5AW, but the latter was worked on the evening of 27th by 52DR and again at 0700 hrs. next morning by 52DR and 52CR.

At least two Adelaide stations, STN and 5ZCR, have built xtal markers using 5 Mc. xtals to give a signal on 145.00 Mc. for project "Oscar," the American satellite on that freq. These 145 Mc. markers would be handy also for listening to the VK6 beacon on 145 Mc.

One metre has only one regular station on xtal control, but the mod. osc. boys had a red-letter day on 28th and 29th Oct. when a number of near-country contacts were made (good tropospheric conditions).

Brian 5TN is experimenting with a new final amplifier on 50 Mc. using a 1007H. Brian is also talking about a 4-250A on 144 Mc. 5ZFG worked 3ZGD on 144 Mc. (Adelaide to Melbourne) on 3rd Nov. This is the first contact from Adelaide to Melbourne. It appears that 5ZDR didn't work 3ZGD.

During the coming season southern VK7 stations will be aiming at 2 mx DX for the first time. We hope to have as much success as our northern colleagues. A complete list of freq. and relevant details of VK7s interested will be circulated amongst mainland stations in groups to be shown interest. A few of the stations concerned are: 7MX 144.377, 7ZAI 144.35, 7ZAK 144.018, 7ZAD/7ZAQ 144.14. There may also be some stabilised 7 mx stations looking for DX.

At time of writing (late Oct.) southern States are again in a panic over the possibility of a typhoid epidemic and others at 1830 hrs. daily; believe 7LZ and TBQ contacted the VK3 stations during mid-Oct. On 19th inst. the VK3 V.H.I. Group operated from Wellington, New Zealand, in an attempt to reach portable VK3 stations. In particular—we hope this proved successful. The group used a 100 watt beam antenna and a 1000 watt c.w. power at this site—equipment used was 90 watts to a 24 element yagi. This beam was used to reach the VK3 stations. The group will make portable operations "from our best site" considerably less difficult by courtesy of one of our i.v. stations—and may provide a new record.

Six mhz is very quiet DX-wise; the only sig. was c.w. on 58.15 heard by 7ZAL on either side of the band. No other c.w. or "DX" reports were on deck.

Col 7LZ at Launceston reports some good contacts on 2 mx. He worked 3DY and 3ZDP on Nov. 5 and heard 3ZCG. Col hears a carrier or tone from 3ZCG on most nights which would be strong enough for a c.w. contact. TDK has a good converter on 144 Mc. now and will be on soon. He is at Postina, a hydro-electric town 1,000 ft. up in the Western Tiers. Col also sends his following statistics for 144 Mc.: VK3s, 74 different stations; QSLs from 55. VK5s, two stations and two QSLs. On 283 Mc., four VK3s and four QSLs.

As you are no doubt aware, dates of two record QSOs in the official list of VK v.h.f. records are incorrect, i.e. p.4 Nov. '68.

I have information to hand from VK2RU that the date of his QSO with JA1ANO on 50 Mc. was 1/4/56.

I have been unable to ascertain reliably the date of the 144 Mc. QSO between VK3ZCW and VK7LZ. I am not persevering with this one as I believe this distance has been bettered by VK7LZ. I will forward full details when and if I get reliable information.



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# NOTES

## FEDERAL QSL BUREAU

Divisional QSL Managers are requested to note the corrected address for W4—  
W4BYW, Mr. Thomas A. Moss, P.O. Box 20644, Municipal Airport Branch, Atlanta 20, Georgia, U.S.A.

The Rabaul Amateur Radio Club notifies its address as the Bureau for New Guinea: Rabaul Amateur Radio Club, P.O. Box 170, Rabaul, New Guinea. Apparently Papua still goes to VK3RO.

The present address of the QSL Bureau for American Forces in Germany is: DL4 and DL3 QSL Bureau, C/o DL4VJ, Base M.A.H.S. Station, A.P.O. 120, New York 20, N.Y., U.S.A.

Cards for DJ or DM stations should be sent to D.A.R.C., Box 99, Munich 27, Germany. At one time all DJ and DM stations were of French nationality, now all DL4 and DL5 stations are either members of American armed forces or civilians employed by American armed forces. Since most American Hans in Germany are not members of the German national society, D.A.R.C., it is requested that your cards be sent directly to New York so that the D.A.R.C. QSL Manager is not overloaded with cards for non-member stations.

—Ray Jones, VK3RJ, Manager.

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## FEDERAL AWARDS

W.A.V.K.C.A.—During the past six months awards for: 1961-62, 1960-61, 1959-60, 1958-59, 1957-58, 1956-57, 1955-56, 1954-55, 1953-54, 1952-53, 1951-52, 1950-51, 1949-50, 1948-49, 1947-48, 1946-47, 1945-46, 1944-45, 1943-44, 1942-43, 1941-42, 1940-41, 1939-40, 1938-39, 1937-38, 1936-37, 1935-36, 1934-35, 1933-34, 1932-33, 1931-32, 1930-31, 1929-30, 1928-29, 1927-28, 1926-27, 1925-26, 1924-25, 1923-24, 1922-23, 1921-22, 1920-21, 1919-20, 1918-19, 1917-18, 1916-17, 1915-16, 1914-15, 1913-14, 1912-13, 1911-12, 1910-11, 1909-10, 1908-09, 1907-08, 1906-07, 1905-06, 1904-05, 1903-04, 1902-03, 1901-02, 1900-01, 1899-00, 1898-99, 1897-98, 1896-97, 1895-96, 1894-95, 1893-94, 1892-93, 1891-92, 1890-91, 1889-90, 1888-89, 1887-88, 1886-87, 1885-86, 1884-85, 1883-84, 1882-83, 1881-82, 1880-81, 1879-80, 1878-79, 1877-78, 1876-77, 1875-76, 1874-75, 1873-74, 1872-73, 1871-72, 1870-71, 1869-70, 1868-69, 1867-68, 1866-67, 1865-66, 1864-65, 1863-64, 1862-63, 1861-62, 1860-61, 1859-60, 1858-59, 1857-58, 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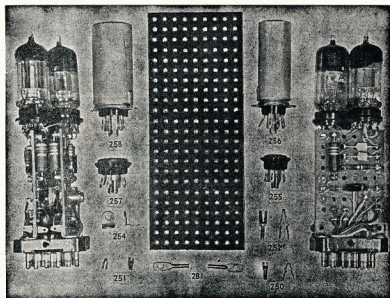
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the other hand was mostly dead but a very good opening on Saturday evening gave us the real DX contacts. At no period were we able to raise a contact on 10 mx, and we were very sorry not to contact the Headquarters Scout Station in Montreal, VE3JAM. 6 mx carried a surprising amount of traffic (VK6 was worked too), while 2 mx produced only one contact—a 4/4 effort over a five-mile path! We heard a lot more but the 532 went sick and was not repaired effectively in spite of some pretty intense effort on the part of all concerned.

Apart from the great amount of fun that was had by all, the Scouts themselves showed a great interest in the workings of Amateur Radio and expressed their appreciation of our efforts. We in our turn learned more about portable operation.

★  
Photo taken of Scout Group at Kallangur, just outside of Brisbane during the Jamboree of the Air. Equipment lent by R. H. Cunningham P/L for the occasion. The arrangements and installation were made by Peter VK4PJ.



★

# QUEENSLAND

Here in the Sunshine State, the Scout Jamboree of the Air was well supported by the active Amateurs and in doing so we received a lot of valuable publicity and goodwill. A State-wide coverage was obtained and due to the efforts of those participating I think the basic principles of Amateur Radio sown in the minds of today's youth will produce Hams of tomorrow.

Thanks goes to Peter 4PJ who arranged for our Governor and State's Chief Scout, Sir Henry Abel Smith, to record a speech which was played over the air three times on Saturday and twice on Sunday. Peter also arranged the loan and installation of a Gelson Transmitter/Receiver for the Kallangur Scout Group. The individual Hams in Queensland were too numerous to mention, but the following are some who received local newspaper coverage.

In the South Coast area the Coolangatta Radio Club, 4AR, was heard going great guns. Also a portable tx and rx were installed in the den of Southport No. 1 Troop by the Southport Radio Club. Quite a number of Scouts attended there on Saturday and Sunday afternoons. Unfortunately, due to an oversight no operator was on duty on Sunday morning, but the Group found plenty of interest in logging stations heard on the BC348 in the den. The Scouts also paid visits to the shacks of Neal 4WW and also Bill 4WS.

In the Ipswich area, local Hams taking part were 4KO, 4JR and 4AY. In Rockhampton our old friend and active participant in civic affairs, Frank 4FN, with H. Hobler, did a worth while job in establishing a station at the Fitzroy Scout Headquarters. Our best wishes go to Frank who took sick on the Saturday night of the Jamboree and had to be assisted home. H. Hobler kept the station operating on the Sunday. Facilities of 4UX were extended to the Scouts of Ayr and Home Hill and from report many interesting contacts were made.

As for the feelings of the Scout Group, I think the following extract of a letter from Jim Mayfield, S.M. of the Kallangur Group, will clear this point:—

"Many of the boys were not too keen at all to begin with, but it is a credit to the operators and the Amateur Radio movement generally that by the end of the day most of the Scouts were quite interested and indeed some were most enthusiastic about the whole venture and would have liked to go on all night. At this stage I would like to pay tribute to the Amateur Radio movement and to the Queensland Branch of the W.I.A. for the work and enthusiasm which they put into the Jamboree in order that it should be successful. To me, it was quite evident that a spirit of brotherhood and friendship exists in Amateur

The QSL cards provided by the Queensland Tourist Bureau will be on hand soon and Jack 4JF has been appointed distribution officer. The cards will be free and will be available upon request. These cards were supplied and designed by the Tourist Bureau as being the most suitable for depicting Queensland overseas. Cost prevented the cards being printed in more than two colours, which ruled out the possibility of printing multicoloured scenes of the State, etc., which would have been better received. The normal printed QSL information is on the card with space left for insertion of the individual Amateur's call sign.

Also discussed at Council was the cost of sending a delegate to the next Federal Convention at Perth. There have been few agenda items submitted to the Council for this Convention so if you have not sent in that one you have been holding, do so now. The constitution is being reprinted and will be available free upon request. Clerical procedure is being improved within the Council which will mean a rapid reply to your correspondence. Steps are being taken to form a 'Listeners' Group and details will be supplied at a later date. There is a vacancy in the position of Class Manager so if you feel competent, let's have your name. The visit to Amberley Air Base was enjoyed by the 25 present and all voted it as an interesting experience.

We had a good attendance at our October general meeting, general business being quickly despatched to make way for an interesting lecture by Mr. Harry Brown, 4IA. He gave a very informative lecture showing that he really knew about 'Ionospheric Predictions' and how little we knew about the subject ourselves.

A discussion took place on the new frequency allocations and concern was expressed by some of the more experienced members on the present position. No matter how much a person has, continual removal of minor portions will surely whittle him down to nothing. This is a democracy and our own personal views can only be brought before the governing body through our elected government representatives.

## SOUTH COAST ZONE

The moblifers to and from the Sunshine State are not, either at their homes or very close to them. Meeting up with Sid 2SG ex-4SE was quite an occasion. His company would raise the depressed to high levels and his brief stay was very enjoyable. Eric 4RX is back in Queensland and ere these notes are completed he will be back at home, while Jim 4HS is approaching the border. Apparently all had a most enjoyable trip and the friendliness of Hams on the air and in person added to the enjoyment of the holiday. The Coolangatta Radio Club are starting C.P. classes. May success attend their good work. 4WS has been in contact with 2ABZ—originally OA4AB. Being an old Queenslanders, 2ABZ is anxious to contact any VKs especially 4WR, 4WO and 4RJ.

Radio which conforms to the ideals of Scouting."

The October Council meeting was held at Peter's (4PJ) QTH and those attending were 4PJ, 4CI, 4DG, 4RL, 5ZBZ, 4AO, 4JF, 4KB, 4VM, 4EF, 4AW and associated John Brimblecombe. There were four applications for membership. There has been a general move to streamline procedures for the Council and the following items are results of this move. Ballots for disposal equipment will be drawn at the Council meetings and this will insure a rapid turnover of disposal gear. For this reason, all correspondence for disposal gear only should be marked "Disposal" on the envelope. Also, the trustees and councillors have decided to dispose of some of the items held in the technical library. These items are ones that are seldom used and they will be disposed of by tender to the members.

# SB60 COMPLETE S.S.B. TRANSMITTER



Featuring All-Band Operation with full Voice-Control facilities. Unit comprising ARS S.S.B. Phasing Type Generator, modified Command V.F.O., frequency multiplier, 12BY7 mixer, 5763 driver, pair 6146s Class AB1 P.A. Pi-coupled, 150 watts input on all bands.

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Power Supply available as an optional extra, £25 tax paid.

Any S.S.B., A.M. or associated equipment available to your own specifications

★  
We extend to all Amateurs our best wishes for a Merry Xmas and a Prosperous New Year. May you achieve that DX contact in 1962!

## AMATEUR RADIO SERVICE

605 ABERCORN STREET, ALBURY, N.S.W. Phone 1695

### CHANGE OF ADDRESS

W.I.A. members are requested to promptly notify any change of address to their Divisional Secretary, not direct to "Amateur Radio."





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### MECHANICAL SPECIFICATIONS:

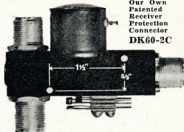
**High Contact Pressures:** Long-life expectancy greater than one million operations—Continuous Duty. Teflon feed-through terminals used on coil to provide connection ease. **Small, Compact:** only 2 1/4 x 3 1/4 x 1 1/4 inch. **Light weight:** less than 9 ounces. Dow designed U.H.F. (standard) or type N (slight additional cost) r.f. connectors available. Specify if type N connector.

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Protection  
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DK60-G2C



DK60



DK60-G

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## CRYSTALS ALL THESE FREQUENCIES £1 EACH

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DC 3050	FT 4440	FT 4930	FT 5635	DC 6021.1	DC 6561.3	FT 7375
FT 3195	FT 4445	FT 5005.6	FT 5655	LP 6032	FT 6550	LP 7450
DC 3320	FT 4465	FT 5110	FT 5680	LP 6040	FT 6560	DC 7400
DC 3322.5	FT 4483	DC 5145	DC 5700	FT 6050	LP 6561	FT 7406.6
FT 3340	FT 4490	DC 5168.6	FT 5706	LP 6110	DC 6572.3	FT 7425
DC 3440	DC 4495	DC 5170	DC 5710	LP 6130	LP 6640	FT 7450
FT 3690	FT 4535	FT 5180	FT 5740	LP 6210	FT 6650	FT 7490
FT 3828	FT 4540	FT 5205	FT 5744	FT 6225	DC 6700	LP 7890
DC 3830	FT 4549	DC 5210	DC 5770	FT 6235	DC 6750	DC 7890
FT 3830	DC 4660	FT 5237.5	FT 5773.3	DC 6240	DC 6783.3	DC 7925
FT 3885	FT 4672.76	DC 5250	FT 5775	LP 6243.3	FT 6815	LP 7930
DC 3930	FT 4676	DC 5285	FT 5780	FT 6265	FT 6840	DC 7962.8
DC 3970	FT 4695	FT 5295	FT 5782	FT 6300	FT 6890	DC 7810
DC 3995	FT 4730	LP 5300	DC 5810	DC 6350	FT 6935	DC 8036.2
FT 4010	FT 4735	FT 5360	FT 5815	FT 6355	LP 7010	DC 8171.25
FT 4025	FT 4750	FT 5365	FT 5852.5	FT 6375	LP 7120	DC 8176.9
FT 4065	DC 4750	FT 5397	FT 5855	DC 6420	LP 7171	DC 8182.5
FT 4080	LP 4765	DC 5410	FT 5897.5	FT 6462.5	FT 7175	DC 8460
FT 4180	FT 4780	FT 5437	FT 5910	FT 6470	FT 7200	DC 8469.23
FT 4235	FT 4815	DC 5515	LP 5910	FT 6515	LP 7205	DC 8645.45
FT 4280	FT 4840	DC 5530	FT 5920	LP 6522.9	LP 7270	DC 8488
FT 4295	FT 4852	FT 5551.5	DC 5950	FT 6535	LP 7350	DC 8525
FT 4315	FT 4885				DC 7362.5	DC 8562.85

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FT 3535 DC 3560	DC 8383.3 = 50.3 Mc.	DC 8016.5 DC 8023	DC 8030
FT 3536 DC 3562	DC 8400 = 50.4 Mc.	DC 8017 DC 8023.5	DC 8030.5
DC 3537 FT 3564	DC 8416 = 50.5 Mc.	DC 8017.5 DC 8024	DC 8031
FT 3534 FT 3573	DC 8450 = 50.7 Mc.	DC 8018 DC 8024.5	DC 8031.5
DC 3547 FT 3575	DC 8483 = 50.9 Mc.	DC 8018.5 DC 8025	DC 8032
FT 3549 FT 3580	DC 8500 = 51 Mc.	DC 8019 DC 8025.5	DC 8032.5
FT 3552 FT 3587		DC 8019.5 DC 8026	DC 8033
DC 3552 FT 3595		DC 8020 DC 8026.5	DC 8033.5
		DC 8020.5 DC 8027	DC 8034
		DC 8021 DC 8027.5	DC 8034.5
		DC 8021.5 DC 8028	DC 8035
		DC 8022 DC 8028.5	DC 8035.5
			DC 8029
7 Mc. Ham Band:	144 Mc. Ham Band:		
Crystals of any frequency, £2.	DC 8000 DC 8014	DC 8021	
	DC 8010 DC 8014.5	DC 8021.5	
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	DC 8013.5 DC 8015.5		

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A.c. volts: 0-10, 50, 100, 500, 1,000.  
D.c. current: 0-50  $\mu$ A.; 25, 250 mA.  
Resistance: 0-60K ohms; 0-6 meg.  
Capacity: 0.01-0.2  $\mu$ F. (at a.c. 5v.); 0.0001-0.01  $\mu$ F. (at a.c. 250v.).  
Decibel: minus 20 db. plus 22 db.  
Output range 0-10, 50, 100, 500, and 1,000.  
Battery used: UM3 1.5v. 1 piece.  
Dimensions: 3 1/4" x 4 1/4" x 1-1/8 inch.

Complete with internal battery, testing leads and probe.

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